

## **Cultivating the Ground for the Study of Education as an Interdisciplinary Enterprise: A Philosophical Perspective**

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*There has been no shortage in calls for interdisciplinary enquiry. Yet it is often difficult to know exactly what is intended by this in the fullest sense. What is interdisciplinary enquiry in its totality? If we do not know precisely what it is, how do we bring this kind of enterprise to fruition?*

*The study of education, while being already interdisciplinary in some sense, is far from ideal. Whereas the sociology of education and educational psychology that are somehow “scientific” in character have retained widespread appeal, the history and philosophy of education, which are not necessarily scientific, have lost much of their appeal. This indicates that something has been left out of the development and expansion of the study of education. What has been left out, this paper asserts, is a broader reconsideration of the normative character of our knowing something in particular and of our lives in general.*

*This paper draws on the combined conceptions of “the space of reasons” and “second nature” to fully acknowledge the need for an interdisciplinary perspective on the study of education and on the role of education itself in a broader context of human living. To develop an appreciation of these notions suggests that philosophical thinking should be open to, rather than proffered in intrinsic opposition to, empirical or “scientific” investigations. The happy consequence of such a position is that this would open up a far more inclusive terrain on which educational issues can be addressed.*

**Keywords:** interdisciplinary enquiry; the study of education; the interconnection between the factual and the normative; the space of reasons; second nature

### **1. An Eternal Dream? Perpetual Calls for the Ideal of Interdisciplinary Studies on Education**

From around two hundred years ago, scholarship, rather generally speaking, began to diverge more and more into particular disciplines and specific sciences, out of which subject disciplines

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in the modern sense were born. Then, in the 19th-century, several intellectual activities gained academic currency as sciences—sciences in the contemporary sense. Since then, there has been no shortage in calls for interdisciplinary enquiry.<sup>1</sup> Yet it is often difficult to know exactly what is intended by this in the fullest sense. What is interdisciplinary enquiry in its totality? If we do not know precisely what it is, how do we bring this kind of enterprise to fruition?

Indeed, watering down the achievements of increasingly narrow and specialised academic disciplines would take us far from a central aspiration of interdisciplinary enquiry. Disciplinary specialisation has produced a vast amount of genuine and useful research to which our everyday life owes a great deal. Even the most cursory reflection on the rapid scientific and technological advancement by professionalised specialists working within fragmentarily specialised academic domains suffices to show that it is simply ridiculous to dismiss specialisation as all bad. Nonetheless, the broad notion that some antidote to the excessive specialisation is needed is a cogent one. Disciplinary specialisation has resulted in scarce communication and much misunderstanding between specialists from different disciplinary backgrounds. Thus, the following description of Michael Gibbons and his colleagues who argue for a distinction between traditional, discipline-based knowledge production (“Mode 1”) and more recent, context-driven transdisciplinary research (“Mode 2”), is no exaggeration: “even among neighbouring specialists and among subfields within one discipline increasing difficulties are experienced in maintaining standards of expert scientific literacy” (Gibbons, et al, 1994, p. 28).

The study of education is no exception. It has become so fragmented that it seems unwarranted that “educational researchers” can engage in informed and professional conversations with each other in journals, academic meetings and any other public forum or colloquium. An illustration of the enormous fragmentation in the study of education is found in the following observation made by Frederick Ellett:

The program for the annual meeting of the American Educational Research Association (AERA) reveals that with all the space for the special interest groups there is really not much holding the organization together. (Ellet, 2002, p. 323)

Japanese counterparts perceive a similar rift between educational researchers. Anyone sympathetic to this legitimate worry should therefore welcome a symposium held in December, 2012 organised by the Japanese Educational Research Association (JERA) on the very nature of the study of education, which is a collaborative enterprise by educational researchers with different backgrounds. Such efforts could be a viable way to facilitate the flourishing of the study of education.

I think that there is little possibility of one perfect form of interdisciplinary enterprise that dissolves all the apparent problems relating to disciplinary specialisation. I also will not undertake any systematic consideration in this paper of how a higher degree of integration between disciplines is to be achieved by an appeal to the oft-employed inter-, multi-, cross-, trans- and other disciplinary formulations.<sup>2</sup> Rather, my only intention here is to make a convincing case that *philosophical* thinking should play a far greater role than perhaps previously acknowledged in the development of interdisciplinary enquiry (especially into education). Indeed philosophical thinking can facilitate, if executed well, a more inclusive and rigorous grasp on the meaning behind doing interdisciplinary work.

It is extremely difficult to pin down what philosophy actually is, however. In fact, the question of ‘what is philosophy?’ is still a central topic of attention among contemporary

philosophers. What is intended by ‘philosophical thinking’ in this paper is largely academic deliberations that address questions concerning *normativity*. There is, even in the academic philosophical community, no agreement about what the normative is exactly nor what it entails. What I mean by the normative in this paper is, broadly speaking, what is prior to and enables the conducting of sciences; put another way, the normative cannot in itself become a subject matter of scientific investigations of any kind. To bring out the significance of normative aspects embedded in forms of empirical, scientific investigations, particularly and in the lives of human beings, would add a new set of voices to the debate on future directions for the study of education. As will be discussed in section 4 below, the notion of “the space of reasons” and the line of philosophical reasoning developed by John McDowell (1996) provide an important clue as to how the normative is to be understood.

My contention may be easily greeted with the suspicion, however, that philosophers have not made an effective case for the implications of their work in interdisciplinary discussions.<sup>3</sup> Such a familiar uneasiness with philosophy has drawn many researchers away from philosophical speculations and towards new scientific endeavours involving a more narrowly rigorous life in interdisciplinary studies. The “third culture” may be a case in point. This enterprise seeks to bridge the gap between what C. P. Snow famously termed “two cultures”—i.e. between literary intellectuals and scientists (Snow, 1964); but the main source of its theoretical perspective is the growing insights drawn from the life sciences (especially, from evolutionary theory) rather than from philosophy, though it is certainly a necessary first step to depart from a dominant influence of the physical sciences in the intellectual scene (Brockman, 1995). I have no wish to discredit the work through a renewed interest in the life sciences, but there lies a question-mark in regard to interdisciplinary activities that lack a substantial philosophical reflection on the very conditions of the possibility of our knowing. This is, first, because normative evaluation is always already immanent in scientific investigations; second, more broadly, it is because the factual and the normative are inextricably intertwined. My main aim in this paper therefore is to highlight the sense in which the proposed reformulation of interdisciplinary enquiry (into education) is to be understood less as a new “scientific” project but as a philosophically informed enterprise.

The current paper, as noted above, is primarily concerned with the study of *education*. It is an intriguing and important context in which to place this issue, for the nature of the study of education has been a subject of enduring controversy and most educational researchers seem to lose sight of the common ground for advancing mutual understanding. In the history of the study of education, there has been “a conflict between a pluralist, eclectic outlook conveyed as ‘educational studies’ in which the disciplines are pre-eminent, and a quasi-scientific approach expressed as ‘educational research’ in which the disciplines are relegated to the margins” (McCulloch, 2002, p. 102). Predominant among those engaged in the study of education used to be the view that “education” is not a single discipline but a field of applied research to which different academic disciplines contribute.<sup>4</sup> More recently, in contrast, “educational research” has been advanced as a unitary, distinctive and autonomous area of study in its own right. Either way, the point here is that education can be viewed as *already* interdisciplinary in some sense.<sup>5</sup> However, this interdisciplinarity is unsatisfying, for the present form of education seems little more than a conjoined but separate academic activity. I hope, in what follows, to provide a basis for future intellectual development in relation to philosophically guided interdisciplinary work on education, which goes beyond the boundaries of the interdisciplinarity of the conjoined but separate kind.<sup>6</sup>



This paper first looks at the controversial nature of the study of education in relation to the disciplinary studies of education and the emergence of “educational research.” Then, taking issue with the scientification of the study of education, it next draws attention to the tension and interweaving between the factual and the normative, between the empirical and the conceptual, between the descriptive and the evaluative. My premise here is that such tension and interweaving can be best captured when it is understood in light of “the space of reasons”, the idea that Wilfrid Sellars (1997) coined and John McDowell (1996) has refined. The paper concludes by exploring the major implications of the space of reasons for interdisciplinary work on education.

## 2. Competing Conceptions of the Study of Education: Eclectic or Unified?<sup>7</sup>

Richard Peters, one of the founding “fathers” of the philosophy of education in the U.K., claimed in the 1960s that: “education is not an autonomous discipline, but a field, like politics, where the disciplines of history, philosophy, psychology and sociology have application” (Peters, 1980, p. 273). As noted earlier, this view prevailed around half a century ago when certain educational disciplines were brought into prominence.<sup>8</sup> The four disciplines Peters mentions—history, philosophy, psychology and sociology—constituted foundational resources for the study of education and are sometimes called the “foundation disciplines”. Given the preoccupation at that time with disciplinary studies of education, the following assertion of R. F. Dearden, another leading authority in the philosophy of education, is hardly surprising:

I do not know quite what an “educationist” is, or what sort of expert or authority he [*sic*] is supposed to be. I know what a philosopher of education is, or an educational psychologist or an educational sociologist, but I am not at all sure what a plain “educationist” would be. (Dearden, 1970, p. 2, cited in Bridges, 2003, p. 33)

Bringing disciplinary attention to bear on questions of education increased the rigour of enquiry, thereby achieving the disciplinary standing of the foundation disciplines. The overwhelming emphasis on the disciplinary approach was not without problems, however. There was often criticism that the high price that a strong link between the educational disciplines and their “parent disciplines” must pay for high standards of academic rigour was to lose their *practical* relevance to education. It is hard to deny, as Gary McCulloch states, that “[i]n many cases, disciplinary-based studies were aligned more clearly to the parent discipline than to the study of education, and they could often be remote from educational practice” (McCulloch, 2002, p. 117). One of the side effects of the disciplinary approach is that “[in disciplinary-based journals in education] there were to be basically two audiences: a disciplinary priesthood and a broader educational laity” (Ibid., p. 116, my italics).

It is perhaps no accident that the widespread dissatisfaction among those interested in practical issues in education with the discipline-oriented approach invited “[t]he rise of a more unitary notion described as ‘educational research’ from the 1970s onwards” which “promoted the view that education was a distinctive and specialised area of study in its own right, and therefore challenged the primacy of the disciplines of philosophy, history, sociology and psychology” (Ibid., p. 101). The appearance of “educational research” has changed the intellectual landscape in education studies. David Bridges pithily summarises the essence of this change:

Thirty years ago [in the 1960s and 1970s], then, talk of the disciplines of education was a shorthand for history, philosophy, sociology and psychology of education. But today we are confronted by an educational research community characterised by the diversity, hybridisation and the fragmentation of its practices. (Bridges, 2003, p. 40)

An enormous range of intellectual resources has been made available in the study of education, resulting in the radical expansion of “educational research”. Such expanding intellectual resources are: “from every nook and cranny of the social sciences and especially from ethnography; from the study of language and literature; from biography and autobiography; from cultural studies; from politics, policy studies and political theory; and, more hesitantly perhaps from the creative arts, from photography, poetry and,... from narrative fiction” (Ibid., p. 39). This diversification of method and conceptual apparatus has threatened to undermine the case for the primary importance placed on the “foundation disciplines”. This culminated in, for example, one major American symposium proceedings published in 2000, which emphasises the greater prominence of anthropology, pedagogy, linguistics, psychology and sociology as the disciplines that are of profound relevance to the study of education, and which challenges the traditional emphasis on history and philosophy (McCulloch, 2002, p. 116). Indeed, it has become commonplace (at least among educational practitioners and policy-makers, and at worst among many “empiricist” educational researchers) to say that history and philosophy are perceived to have little, if any, relevance to policy or practice in education.

It is not only difficult but also perhaps unnecessary to settle on a single conception of the study of education as disputes about its nature may be irresolvable. I have no intention to put my finger on such a murky matter. Yet, I think the question that deserves more detailed attention is, among the four “foundation disciplines”, how sociology of education and educational psychology are presumably more “scientific” in character and have retained widespread appeal, while in contrast the history and philosophy of education are not considered necessarily scientific and have lost much of their appeal. This can be taken as an indication that something has been left out of the development and expansion of the study of education. What is missing is a broader reconsideration of the nature and scope of the *normative* character of our knowing in particular and of our lives more generally. To gain some understanding of normativity, one needs to do more than simply talk in the languages of (natural and social) sciences. For sciences come into effect only on condition that a myriad of normative elements are integral to them. Without a degree of sensitivity to the enmeshing of the normative with the factual, it is all too easy to misunderstand the need for an interdisciplinary perspective on the study of education and the role of education itself in a broader context of human living. As will become clear, this paper proceeds, not with the hope of discouraging scientific enquiry into educational issues, but in hopes of promoting and fostering the realisation of a more productive dialogue between the sciences and the humanities.<sup>9</sup>

### 3. The Interconnection between the Factual and the Normative

To portray the general tendency of the contemporary discourse of education as scientification may be bewildering. The scientification of educational discourse is fully implicated, however, in the fact that educational psychology and the sociology of education have survived the challenges raised by the expansion of “educational research”, while the philosophy and history of education

have experienced radical isolation from the mainstream of educational discourse (as the above American symposium proceedings illustrates). Much of the credit for the flourishing of the sociology of education and educational psychology (and newly qualified, quasi-scientific approaches to education) largely rests on the assumption that the empirical approach of the sciences is the most appropriate, if not the only, way of conducting investigations into educational issues. It is simply erroneous to disturb the credibility of scientific enquiry. Still, an inappropriate disregard for the essential role the normative plays in every aspect of scientific endeavour leads to unnerving scientism. This section illuminates the mutual connection between the factual and the normative, which has been given short shrift within the scientific communities of educational research.

Such a connection is far from being obvious. The familiar dichotomy between fact and value hides the way that the factual and the normative intertwine. According to this dichotomy, facts are held to be “absolute, material, objective, and impersonal; values relative, spiritual, subjective, and personal; facts being verifiable by the rigorous, austere methods of science; values being subject to no such assessment” (Elgin, 1997, p. 176). This basic dichotomy still seems to bind, albeit in differing degrees, a considerable portion of those who employ “scientific” and distinctively empirical approaches to questions of education. The danger posed by this dichotomy is the mistaken thesis that facts exist prior to, and independently of, our normative engagement with the world. There is certainly something seductive in the idea that facts do not lie, and thus the primary task of the researcher is to let facts emerge from phenomena as they are.

Yet, the view that facts stand on their own is highly dubious. As Catherine Elgin, Professor of the Philosophy of Education at Harvard, trenchantly puts it, it is not to be forgotten that “we are the ones who set and enforce the standards for what counts as a fact. ... In effect we decree that whatever fails to satisfy our standards hasn’t got what it takes to be a fact” (Elgin, 1997, p. 177). Elgin provides a case for the essential interconnection between fact and value, with a vivid example:

We are apt to think that constructing a biological taxonomy is simply a matter of introducing terminology for *what is already the case*. Then prior to our categorization, dachshunds and Dobermans were already alike; horses and zebras, already different. The problem is that any two things are alike in some respects and different in others. So likeness alone is powerless to settle matters of categorization. In classing dachshunds and Dobermans together, horses and zebras apart, we distinguish important from unimportant similarities. That is, *we make a value judgment*. (Elgin, 1997, p. 177, my italics)<sup>10</sup>

This is to mean that complex mixtures of human concerns, interests, purposes, values, indifference, ignorance as well as our physical abilities and constraints underlie what sciences aim to make intelligible as facts. It by no means follows that this line of argument is equivalent to the unwarranted proposal to renounce the scientific vocabulary of objectivity in favour of the evaluative vocabulary in our everyday lives. It does follow, however, that we should be alert to the attraction of the view that what matters most in research is to let numbers and figures speak for themselves, or to let the data account for how things are. The assertion that the realm of values needs factual or empirical proof by the realm of facts is too one-sided, for they co-constitute the “lights” by which we make sense of how things stand. Neither the realm of facts nor the realm of values takes precedence over the other. Those lights are what Elgin calls “category schemes” which



provide “the resources for stating various truths and falsehoods, for exhibiting particular patterns and discrepancies, for drawing specific distinctions, for demarcating conceptual boundaries” (Elgin, 1997, p. 178). Hence, the “value-ladenness of facts” does not obliterate the discourse of objectivity.

It is instructive here to draw a parallel with what Bridges calls “the discipline of the discipline” (Bridges, 2003, p. 41). Each academic discipline has a particular set of ideals, models, practices, questions, methods, standards, techniques, procedures, problems at hand, assumptions at work, etc. which constitute a shared form of sensibilities and objectivity against which an issue is addressed. This shared sense in each discipline is the medium in which objectivity and rightness count. This is one of the compelling reasons why the study of education needs to take an interdisciplinary form. Appealing to the supervenience of, for instance, the psychological (e.g. the feeling of happiness) or the sociological (e.g. questions of power relations in society) on the physical (e.g. the principles of heredity or neurological token) diminishes the significance of different disciplinary understandings that each academic discipline has cultivated, understandings in the grip of which each specialist has the world in view.

So long as there is no such thing as the fixed order of the world beneath all such different understandings, reductionism in terms of a hierarchy of levels of explanation is out of the question. Its corollary is perhaps that recasting the notion of the study of education as a single, homogeneous field of knowledge may dissociate itself from the immense richness of a discipline-based eclectic approach to it. There is no ground, however, for thinking that the four foundation disciplines alone should enjoy a profound influence on the study of education. Nonetheless, there is good reason to claim that philosophy stands in a different relationship to it in the establishment of a more sophisticated form of interdisciplinary academic research on education. The question to be posed then is not the question of where philosophy would fit in such an interdisciplinary enterprise; but, on the contrary, the question of how and in what degree such an enterprise presupposes a background immersed in philosophical thinking. One of the surest ways to illustrate this point is to highlight the conception of “the space of reasons”.

#### 4. The Space of Reasons as the Humanised World<sup>11</sup>

Doubts may be raised as to whether the argument for the interlocking relationship between the factual and the normative really opens a way beyond the present form of the study of education—i.e. the interdisciplinarity of the conjoined but separate kind. To quiet the fear that the argument in the previous section makes a fuss about nothing, this section amplifies some of the relevant considerations by invoking the notion of “the space of reasons”. The conception of “the space of reasons” has its roots in Wilfrid Sellars, who by now famously brings out the distinction between two modes of intelligibility, namely between one explicable in natural-scientific terms and one that is to be placed in the logical space of reasons. This is to indicate that the space of reasons,<sup>12</sup> unlike the other side of the distinction, is a normative space in which reasons, values, norms, meanings and justifications that are *sui generis* (to human beings) are in operation.

It is of the highest importance to recognise the lives of human beings as inhabitants of the space of reasons. I here want to exploit a McDowellian enterprise. For, John McDowell, arguably *contra* Sellars, finds it preferable not to renounce empiricism—i.e. the idea that experience is

related to empirical thinking—but to offer a mediating connection between causality and normativity by appealing to his much-discussed thesis that even our perceptual experience is already permeated with conceptual content (McDowell, 1996). In the picture he is recommending, where our answerability to the world is secured, there is no conflict between our animality and our rationality, which are often taken to be antagonistic to each other. McDowell finds an accommodation between causality and normativity as well as our animality and our rationality in the idea of “second nature”, the idea which is originally associated with Aristotle’s account of moral development. The conception of second nature is a necessary corrective to the modern vision of La Mettrie of man as a machine; for the acquiring of second nature makes human animals *rational beings*. Similarly, it is an important antidote to the view that scientific investigations should exclusively be privileged in the study of education, for even though scientific enquiry contributes much towards the discovery of facts about our first nature, first nature alone is insufficient for us to live as human beings. Much of our life as human beings is based upon our second nature. It is certainly not that the notion of second nature discounts scientific achievements; it is rather that scientific research on, for example, brain processes is still indeterminate in deepening our understanding of human beings as rational animals, if it lacks a satisfactory comprehension of second nature.

Second nature is requisite for human beings to live *qua* human beings. Many scientists, however, are inclined to see first nature alone as the legitimate target of their investigations without an adequate reflection on the effects of second nature. The complication may reside in the ordinal number “second” in second nature. This ordinal number comes from the fact that we are born with our first nature but *not* with our second nature. Yet it is fallacious to place excessive emphasis on our first nature because it is never the sole, though essential, ingredient of human beings. It is obvious that human animals deprived of the initiation into the space of reasons, as in the case of feral children, do not become “natural” human beings. In this sense, as Meredith Williams puts it, “the natural human being *is* the socialized human being” (Williams, 2010, p. 370, italics in original). This sociality is acquired by initiation into the space of reasons which abounds in meaning, values, norms and so on that human traditions have been shaping. In other words, to bring a human mode of life into play, we need to first acquire and then develop our second nature composed of capacities and sensibilities necessary for rational animals.

There are serious objections to this view. For example, Alasdair MacIntyre, arguing against the *sui generis* character of our second nature, makes a conscious effort to feature the importance of the continuities and resemblances between some aspects of rational abilities of non-human animals and those of human beings. What he tries to achieve in the relevant discussion is:

to undermine the cultural influence of a picture of human nature according to which we are animals and *in addition* something else. We have, on this view, a first animal nature and in addition a second distinctively human nature. The force of the “and” is to suggest that this second nature can, at least in the most important respects, only be accounted for in its own terms. Its relation to our given biological nature is thought of as external and contingent in a way and to a degree that permits a single sharp line to be drawn between human beings and members of all nonhuman species. (MacIntyre, 1999, pp. 49–50, italics in original)

MacIntyre is right that our animality (first nature) loses nothing of its force even after we acquire our second nature. This fact, however, does not carry with it the commitment either that the



second nature of other living species functions in much the same way as our second nature or that all social practices in the space of reasons can be reduced to “our given biological nature”. Even if it is granted that we share 99% of our DNA with chimpanzees and they are rational and highly intelligent animals, it would be nonsense to say that 99% of the lives of human beings have elements of similarity to those of chimpanzees. Even if it is granted that some central capacities of human beings issue from our biological nature, it would be absurd to suggest that our biological needs for survival or reproduction determine, for instance, whether we should use chopsticks or forks and spoons.

The point to appreciate is that second nature does not disfavour first nature. What enables human beings to live as rational animals is a coalescence between our first nature and second nature. In other words, our animality and our rationality are deeply entangled and their entanglement makes human animals human beings.<sup>13</sup> This is meant to imply that the world we human beings live in is not an inanimate, meaningless environment governed only by causal relations of things and events but the space filled with meanings, norms and values that are unique to human beings, which is, in short, the humanised world. This is not to deny that changes in the physical structure of the planet Earth (e.g. the loss of oxygen and the increase in its surface temperature) may cause the extinction of animal life in several millions years time. Nevertheless, our survival and demise in the humanised world do not depend entirely on physical conditions of the world.

The right moral to be drawn from this thread of argument is that human living and growth is essentially of an *educational* nature. This is no surprise. For, as mentioned, human animals that are yet to be initiated into the space of reasons inundated with our second nature are not full-fledged human beings. David Bakhurst encapsulates this point:

Indeed, the socio-historical conception [of the human mind] answers the age-old question, “What makes human beings special?” with an appeal to *our capacity to educate and be educated*. (Bakhurst, 2011, p. 123, my italics)

The implications to be drawn out of this picture are profound and resist easy summary. I venture, however, to explore such implications for the future of interdisciplinary research in the study of education in the next, final section.

## 5. Closing Remarks: Some Suggestions for the Development of Fruitful Interdisciplinary Studies on Education<sup>14</sup>

The interplay between our first and second nature makes us human beings. Hence, the conception of second nature has to come into play in discussions of the nature of human beings as rational animals. But second nature is *not* what we are born with. It should be acquired through initiation into the space of reasons of which uniquely human modes of engagement with the world are constitutive. Not only this, but the fact that the place we inhabit is the humanised world where causal mechanisms do not have “all the answers” affords insight: that our world of meaning is never fixed or inert.

Initiating each human child into the space of reasons is an essential prerequisite for them to become a fully rational agent. And, once initiated, we cannot move beyond the space of reasons, but that does not deny that we can shift the context of the space of reasons within the purview

of it. All these developmental processes of human living and the humanised world deserve to be called “educational” and they are worthy of the time and energy of any person concerned with the study of education. This is precisely the line of thinking through which I want to approach the issue of interdisciplinary studies on education.

That is: an ideal form of interdisciplinary enquiry in the study of education grows out of a sophisticated awareness of the developmental dimensions of human living and our world. If a step is taken in this direction, the notion of the space of reasons comes to centre stage. For any kind of human behaviour, actions, practices both individually and collectively—from using chopsticks to designing physics experiments—takes place in the space of reasons. It is misleading, as discussed earlier, to view data and numbers as representing facts and phenomena as they are, ones that are located *outside* the space of reasons. The point is that only in the light of the normative context of the space of reasons do data and numbers count as objective standards for facts and phenomena.<sup>15</sup> Conceived in this way, the misleading dualism between the factual and the normative, between the empirical and the conceptual and between the descriptive and the evaluative is to be dissolved.

It must not be assumed that the conception of the space of reasons helps to make a philosophical case against empirical, scientific research. Instead it is to be understood as illuminating one of the ways in which the development of fruitful interdisciplinary studies on education is envisaged. That is, no single methodological and theoretical investigation suffices to capture the richness and complexity of the lives of human beings in the normative environment. Multiple perspectives are desiderata. It is not just that different academic disciplines need to attain high levels of advancement by coping better with internal issues and problems in their own settings for their own intrinsic interest. It is also that they should, in concert with other disciplines, constitute a broader context that is greater than the sum of each discipline, and they should project the context back onto their respective disciplines. In this picture, each academic discipline is self-standing and, at the same time, is part of a larger endeavour to make sense of human living and the environment in which we live. What integrates different academic disciplines into such a broad context is exactly a great sensitivity to the fact that human beings are natural animals in the normative space. To fully appreciate this, philosophical thinking, which is not “scientific” in character, is indispensable.

In this paper, I, as a discipline-minded researcher on education<sup>16</sup> rather than a “plain educationist”, have been concerned to show that philosophy is a necessarily constitutive part of future development for interdisciplinary work on education. Of course, much more work remains to be done to articulate and expand the direction I have been suggesting. Yet I hope this is a small beginning, which makes clear that philosophical thinking should be open to, rather than proffered in intrinsic opposition to, empirical or “scientific” investigations to constitute a more inclusive context in which educational issues are to be addressed. This line of interdisciplinary research has the potential to overcome the charge that education in recent years has failed to offer rich academic sources for envisaging future society.<sup>17</sup> It is therefore entitled to become an important focus for the study of education.

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## Notes

1. José Ortega y Gasset, for example, acknowledged in 1930 that there was an urgent need to establish more intimate relations between different academic disciplines (Ortega y Gasset, 1992).
2. One of the widely acclaimed classificatory schemes with regard to the level of integration of different disciplines is this: “*Level one: Multidisciplinary*. Researchers work in parallel or sequentially from a disciplinary-specific base to address common problem. *Level two: Interdisciplinary*. Researchers work jointly but still from disciplinary-specific basis to address common problem. *Level three: Transdisciplinary*. Researchers work jointly using shared conceptual framework drawing together disciplinary-specific theories, concepts, and approaches to address common problem” (Rosenfield, 1992, p. 1351, italics in original). For an elaborate stage-setting for a better cross-disciplinary research collaboration, see, for example, Jens Aagaard-Hansen (2007).
3. This suspicion applies across disciplines, and as such the subsequent sentences in this paragraph reflect a rather general cynicism in the present academic culture about philosophy. It is to be noted, however, that as will become more explicit from the next paragraph, the focus of this paper is on the prospects for a future development for interdisciplinary work on education. This is precisely because the philosophical perspective on the normative suggested will lead us to a broad rethinking of the *educational* nature of the human condition.
4. One classical version of this view is found in Hirst (1966).
5. “Educational research” has been prompted (at least partly) by “the diversification of method and conceptual apparatus” (Bridges, 2003, p. 40), which will be elaborated in some detail in the next section.
6. I am fully aware of the following tendency, though: “Whether as educational curricula or research programs, all efforts at interdisciplinarity have tended to evolve into narrow disciplines” (Frodeman and Mitcham, 2007, p. 510).
7. I heavily rely on McCulloch (2002) and Bridges (2003, especially Chapter 4) for a historical account relating to the study of education in this section. Both of these texts basically confine their attention to the U.K. context, but I think much of the following description extends beyond it while fully acknowledging that there are a host of contextual factors at play.
8. “To be more accurate, it was the disciplines of philosophy and history that were especially prominent in their development in the 1950s and 1960s, since psychology was already a dominant influence before the 1950s, and sociology was less clearly formed as a distinct community until the 1970s and 1980s” (McCulloch, 2002, p. 103).
9. My description so far may leave the false impression that I treat philosophy as representative of “non-scientific” endeavours. My point is simply that a philosophical reflection on the normative, which is in the background of the empirical, can help to reconceive possible starting points for more productive education studies. As stated earlier, the normative is prior to and enables the conducting of sciences. This is to imply that it is our ways of engaging with the material world and phenomena that at least partly determine which aspects of reality can be possible objects of our knowledge. One corollary to this point is that the content of science and the method of science are not irrelevant to each other. See also footnotes 10 and 14 below. I have also touched upon the relevant issues in Misawa (2011).
10. Elgin is not alone in arguing for erasing the distinction between fact and value. Hilary Putnam, for example, is well known for his effort to elaborate this same point. The kernel of his accusation of the sharp “fact-value-dichotomy” is that value judgments are ineluctably an integral part of scientific enquiry in the sense that it draws, at the deepest level, on the notions of, for instance, coherence, simplicity, plausibility and sometimes even beauty. “Without the cognitive values of coherence, simplicity, and instrumental efficacy”, Putnam argues, “we have no world and no facts....” (Putnam, 1990, p. 139).
11. I give a fuller account of the issues discussed in this section in Misawa (2013, forthcoming).
12. The term “the space of reasons” first appeared in the following passage: “The essential point is that in characterizing an episode or state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what one says” (Sellars, 1997, p. 76, italics in original).
13. So it makes perfect sense that a medication sometimes does not work for particular people. The effect of the medication may be confirmed by the use of, for instance, mice. However, the underlying assumption that “in the respects that matter, mice are no different from humans” (Elgin, 2006, p. 209) is wrong. The entanglement between our animality and our rationality makes us more than purely physical entities.
14. I also elsewhere attempt to articulate hopeful directions for interdisciplinary research on education with sensitivity to the embeddedness between the normative and the empirical in Misawa (2013).



15. For a serious criticism of the view that “[t]here are boxes and boxes of data in the store-room just waiting to be taken away and analysed”, see Paul Standish (2001). For example, he argues: “*The problem here is that the evidence that has been gathered is conceived as in some way inert, as raw material to be processed by the right research methods. And worse, the busyness and efficiency of the research centre in collecting and analysing the data is taken to be clear evidence of a vibrant research culture and to provide a paradigm for what research in education should be*” (Standish, 2001, p. 499, italics in original).
16. I do not, however, settle for the one-sided relationship between, for example, the philosophy of education and its “parent” discipline, mainstream philosophy, which was endorsed by Peters and Hirst. Once the educational nature of human living and the environment we inhabit is fully recognised, traditional philosophical questions are not allowed to remain unchallenged. This is a substantial issue which I have to defer to another paper. But the basic point here is illuminated by Bridges. He remarks that “there is no reason in principle why, for example, ethnographers, historians or sociologists working in other “mainstream” areas outside education should not discover something of methodological, or conceptual, interest in the work of educational researchers” (Bridges, 2003, p. 37).
17. The observation that the current educational disciplines are generally of little help in engaging substantially with the issues of our future society is found, for example, in Hirota (2004, pp. 9–10).

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